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START 3

Superfund Technical Assessment and Response Team 3 – Region 8

1262156

United States
Environmental Protection Agency
Contract No. EP-W-05-050

FIELD ACTIVITIES REPORT

RED AND BONITA MINE SITE
Silverton, San Juan County, Colorado

TDD No. 1008-01

March 22, 2011

URS
OPERATING SERVICES, INC.

In association with:
Garry Struthers Associates, Inc.
LT Environmental, Inc.
TechLaw, Inc.
Tetra Tech EMI
TN & Associates, Inc.

3.0 SITE ACTIVITIES

The following site activities were completed in several different field events at the Red and Bonita Mine site. Collectively these field efforts were completed in order to provide characterization of the current site, and to gather geologic and hydrogeologic data.

3.1 SITE SURVEY AND RECONNAISSANCE

START and EPA mobilized to the site on in June 2010. Site activities included a Differential Global Positioning System (DGPS) survey of the existing waste piles, surface water sampling at the Red and Bonita adit flow, and flume and flow-meter discharge measurements.

3.1.1 Waste Rock

The waste rock dump at the Red and Bonita mine is an estimated 3,200 cubic yards in a two tiered pile. A GPS survey was conducted during the site visit to delineate the extent of waste rock piles at the site (Figure 2). Thickness estimations were also collected using a DGPS. Volumes were then calculated in a Geographic Information System (GIS) and are presented in Table A. Tier 1 constitutes the majority of the waste rock at the site and represents all waste material observed above a bench, or abandoned access road up to the Red and Bonita adit flow.. Tier 2 represents all waste material observed between the main county access road and Tier 1. Though much of the Tier 2 area appears stained, waste rock does not appear to be piled significantly above the ground surface and, therefore, it is interpreted that much of Tier 2 is actually mineralized staining and surface debris (Photos 1). It should be noted that without invasive techniques (e.g., excavation, borehole drilling) to delineate the base of both waste piles, volumetric calculations are estimates.

TABLE A
Waste Rock Area and Volume at the Red and Bonita Mine Site

Red and Bonita Waste Rock Pile	Area ($feet^2$)	Volume ($yards^3$)
Tier 1	22,321	3,160
Tier 2	23,099	802